Wu, Jennifer

From: Wu, Jennifer
Sent: Wednesday, July 19, 2017 9:37 AM
To: Zimmerman, Breean (ECY)
Subject: LNFH Information and links

Hi Breean, thanks for the call this morning. I'll send out compliance schedule language in another email. Here's some follow-up information and links:

Permit and Fact Sheet link: https://www.epa.gov/npdes-permits/npdes-draft-permit-leavenworth-national-fish-hatchery-Washington

Surface water monitoring requirements for flow: page 21 of the draft permit, Section II.B.5. LNFH had asked us where we wanted flow collected, and we'll be clarifying that as in Section II.B.1, all parameters should be measured above the influence of the facility's discharge and below the facility's discharge at a point where the effluent and Icicle Creek are completely mixed.

Flow gages in Icicle Creek and their use in the permit: Here's some information on how we derived effluent limits and how we didn't use flows from the Icicle Creek or Ecology flow gages. However, we'll be explaining in our response to comments why we think the flows we used in Icicle Creek for illustrative purposes were reasonable.

The water quality based effluent limitations (WQBELs) were not derived from the receiving water low flow conditions described in Section V.B. of the Fact Sheet. The analysis on flow was included for illustrative purposes on flows in Icicle Creek if a mixing zone had been used. However, no mixing zone for the facility is authorized since the receiving waterbody is impaired for DO, pH, and temperature; therefore, EPA did not incorporate a mixing zone into the permit.

EPA developed interim WQBELs for phosphorus and temperature using a statistical permit limit derivation approach described in Chapter 5 of the Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001, March 1991, hereafter referred to as the TSD). This analysis used effluent flow data collected by USFWS, which is described in Sections II.A. and II.B. of the Fact Sheet. EPA determined that the 95th percentile of the data rated as "Good" by the USFWS was the most representative statistical flow to use in these calculations. (Note that the effluent flow data rated as "Good" by USFWS is different than data from Icicle Creek rated as "Good" by USGS at Gaging Station 12458000 upstream of the hatchery discussed.)

For Icicle Creek upstream flow calculations, again used for illustrative purposes, not for deriving effluent limits, EPA used all flow data from USGS Gaging Station 12458000 from 1926-2016, with discharge accuracy rates determined as "good" by the USGS. USGS defines discharge accuracy rates as "good," if they are believed to be within 10% of the true value (Email from Mastin to Wu, 2017). EPA chose to use higher rated data, since there were a reasonable number of "good" data points to show flow trends in Icicle Creek and calculate statistically significant flows. Though EPA could have included discharge data with lower ratings, EPA believes the number of data points rated as "good" was adequate to illustrate flows in Icicle Creek. EPA also used all data for flows downstream of the hatchery at Ecology Monitoring Station 45B070 to evaluate Icicle Creek flows. However, again, note that Icicle Creek flows were not used to derive effluent limits; TBELs, water quality standards, TMDLs, and effluent flows were used to develop limits.

Please don't hesitate to call me if you have questions before tomorrow PM. You can call my cell in the next few days, as I'll have it with me in my meetings: (b)(6) .

Thanks, Breean!
Jenny